



U.S. Department of Transportation

National Highway Traffic Safety Administration

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If you requested NHTSA to query its database files in order to identify a specific crash, then that query was made using non-personal descriptors you provided for use in our search. This motor vehicle crash may have been identified from a data search and matches the general, non-personal descriptors you provided, but we cannot confirm that this is the specific crash report you requested.

If you have any questions with regard to the above procedures, please contact the Field Operations Branch, Crash Investigation Division, National Center for Statistics and Analysis at 202-366-4820. Again, please be advised that we cannot confirm that this is the case that you have specifically requested nor can we certify the information to be correct.

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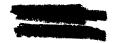
SWRI AIRBAG DEPLOYMENT INVESTIGATION FULL SCOPE

CASE NO. 9002AB

FINAL REPORT

SwRI Project 06-1977 DTNH 22-87-C-37169

Prepared by:



Prepared for:

U.S. Department of Transportation National Highway Traffic Safety Admin.

September, 1989

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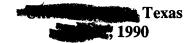
The opinions, findings, and conclusions expressed in this publication are those of the authors and not necessarily those of the National Highway Traffic Safety Administration.

The crash investigation process is an inexact science which requires that physical evidence such as skid marks, vehicular damage measurements, and occupant contact points are coupled with the investigator's expert knowledge and experience of vehicle dynamics and occupant kinematics in order to determine the pre-crash, crash, and post-crash movements of involved vehicles and occupants.

Because each crash is a unique sequence of events, generalized conclusions cannot be made concerning the crashworthiness performance of the involved vehicle(s) or their safety systems.

SWRI AIRBAG DEPLOYMENT INVESTIGATION FULL SCOPE

CASE NO. 9002AB



SUMMARY

On the 1990, at approximately 0920 hours, a 1990 Mercury Grand Marquis, equipped with a driver side airbag, was northbound on a urban freeway in the left lane. Texas. The vehicle was traveling in the left lane at a driver estimated speed of 45 mph when the driver noted that traffic was stopped ahead of her. She steered to the right and applied the brakes, causing the Marquis to slide sideways, left side leading, into the rear of the 1989 Chevrolet Beretta. The impact deployed the airbag and the Mercury came to rest perpendicular to the original direction of travel, across both travel lanes of the freeway. The Beretta was knocked forward and to the left by the impact, into a median barrier, and came to rest approximately 20 ft. north of the point of impact, facing in the original direction of travel.

The accident occurred in the left northbound lane of a four lane divided urban freeway in a mixed commercial and residential area. The roadway surface was polished portland cement concrete which was dry. Ambient conditions were clear skies with an approximate temperature of 85 degrees F.

The 1990 Mercury Marquis was a four door sedan, equipped with a factory installed driver side airbag system. The Mercury sustained moderate left side damage to the left rear door and frame with a repair estimate of \$7365.18. The vehicle was towed from the scene to a local body shop.

The 1989 Chevrolet Beretta was a two door coupe equipped with lap and torso restraints in the front left and right seating positions and lap belts in the rear seat positions. It sustained severe damage to the back right of the vehicle and was determined not repairable by the insurance company. It also was towed from the scene to a local body shop.

The driver of the Mercury was a sixty-one year old woman who was wearing the available lap and torso restraint and was restrained by the deploying airbag. She sustained two fractures of her right forearm, and abrasions of her right forearm. She drove herself to a local hospital, approximately three hours after the accident, where she was treated and released.

The driver of the Beretta was a twenty-four year old woman who was wearing the available lap and torso restraint. According to tthe police report, she was not injured in the accident.

The the were notified of the accident, made the scene and completed an accident report. EMS was summoned to the scene and provided first aid but did not transport any of the victims.

SWRI AIRBAG DEPLOYMENT INVESTIGATION FULL SCOPE

CASE NO. 9002AB



FINAL REPORT

ACCIDENT DATA

Location:

Texas

Area/Type:

Urban/Commercial and residential

Accident Date/Time:

990

Investigating Police Agency:

Police Department

Notification Date:

1990

Accident Type:

Vehicle to vehicle/Angle

Airbag Vehicle Occupant

Injury Severity:

Moderate (AIS 2)

AMBIENCE

Light Conditions:

Daylight

Weather:

Clear

Precipitation:

None

Road Surface:

Dry

Temperature:

85 degrees F

TRAFFICWAY

Airbag Vehicle

Vehicle #2

Location:

Urban freeway

Urban freeway

Number of Lanes:

4

4

Vehicle #2 Airbag Vehicle TRAFFICWAY (CONT) Portland cement concrete Portland cement concrete Surface: .65 Coefficient of Friction: .65 Curbed, paved shoulder Curbed, paved shoulder Roadway Edge: Straight, downgrade Straight, downgrade Roadway Alignment: Heavy Heavy Traffic Density: **TRAFFIC CONTROLS** None None Signals: None None Signs: Lane and edge lines Lane and edge lines Markings: 40 mph 40 mph Speed Limit: **VEHICLES** 1989 1990 Year: Chevrolet Mercury Make: Beretta Grand Marquis Model: Two door coupe Four door sedan Body Style: 1G1LV14W4KE 2MECM75F2LXX VIN: Metallic beige Black Color: Private Private Fleet: Towed due to damage Towed due to damage Tow Status: did deploy, None Airbag not Reported Defects:

Previous Repair: None None

according to driver

VEHICLES (CONT) A

Airbag Vehicle

Vehicle #2

Odometer Mileage:

9571

Unknown

Securiflex Windshield:

Not equipped

Not equipped

Engine:

5.0L/V8 EFI

2.0L/L4

Windshield Damage/Source:

None/Inspection

None/Inspection

Transmission:

Automatic

Automatic

Steering:

Power assisted

Power assisted

Brakes:

Power assisted

Power assisted

Interior Padding:

Padded steering wheel rim and airbag module, upper and lower instrument panel, armrest, door surface, A-pillar and sun visors Padded steering wheel rim and hub, upper and lower instrument panel, armrest, door surface, A-pillar, sun visors, and head restraint

Active Restraints:

Lap and torso in front and rear

outboard positions, lap only in front and rear center seats

Lap and torso in front outboard positions, lap only in the two rear seat positions

Passive Restraints:

Factory installed driver side

airbag system

None

VEHICLE DAMAGE

Exterior

Airbag Vehicle

Vehicle #2

Object Struck:

1989 Chevrolet

1990 Mercury

Accident Event Number:

1

1

Damage Location:

Left side

Back

CDC:

11LPAW4

06BDEW5

Damage Description:

Moderate damage to the left rear door, upper and lower C-pillar

area and left rear wheel

Severe damage to the rear bumper, trunk deck, right rear fender, backlight and right

rear wheel

VEHICLE DAMAGE (CONT)

Interior Airbag Vehicle Vehicle #2

Damage: Left rear door surface, left side None

of rear seat and upper C-pillar

Repair Cost: \$7365.18 Totalled

VEHICLE VELOCITY ESTIMATES

Travel Speed: 35 mph Stopped

Reconstruction Algorithm

Total: 12.9 mph 18.6 mph

Longitudinal: -9.9 mph 18.3 mph

Lateral: 8.3 mph 3.2 mph

Energy Dissipated: 15185.0 ft-lb 56740.4 ft-lb

COLLISION SEQUENCE

Pre-Crash: The 1990 Mercury was northbound in the left lane at a driver

estimated speed of 35 mph. The Mercury crested a small rise on an approach to an underpass when the driver noticed that all traffic had come to a stop. She steered to the right and applied full braking, causing the vehicle to skid, rotating clockwise and sideslip. The Chevrolet was stopped in traffic in the left lane and the driver was

unaware of the approach of the Mercury.

Crash: The left side of the Mercury struck the right side of the rear bumper

of the Chevrolet. This stabilized the rotation of the Mercury and it skidded laterally to final rest. The impact to the rear of the Chevrolet drove it forward and to the left into a median barrier

causing minor damage to the left front of the vehicle.

Post-Crash: The Mercury came to rest facing east, approximately 90 degrees

to its original path of travel. It was approximately 6-8 feet north of the point of impact straddling both northbound travel lanes. The Chevrolet came to rest in the left travel lane still facing in its

original direction of travel.

Driver Activities:

The driver of the airbag vehicle remained in her seat for a few

moments, then exited through the driver door. She noticed no

smokiness or dustiness.

Police Activities:

The police were notified and arrived at the scene approximately

13 minutes after the accident occurred.

Rescue Activities:

EMS was notified and responded, arriving at the scene and

providing first aid. The driver of the airbag vehicle refused

transport.

Treatment Facilities:

The driver of the airbag vehicle drove herself to a

approximately three hours after the accident.

Scene Clearance:

The scene was cleared approximately one hour later when both

vehicles were removed by wreckers

HUMAN FACTORS/OCCUPANT DATA - AIRBAG VEHICLE

Driver

Age:

61 years old

Sex:

Female

Height:

62 inches

Weight:

123 lb

Occupation:

Instructor assistant

Active Restraint Usage:

Lap and torso belt

Source of Usage:

Inspection, driver interview

Eyeglasses:

None

Driver Experience:

46 years

Driver Education:

None

Vehicle Familiarity:

Daily use

HUMAN FACTORS/OCCUPANT DATA (CONT) - AIRBAG VEHICLE

Driver

Previous Accidents:

None

Previous Violations:

1, speeding

Trip Plan:

On her way to work

Route Familiarity:

Travelled daily

Type of Medical Treatment:

Treated and released at a local

Injury

Severity (AIS)

Source

Fracture of the right distal

Moderate (AIS 2)

Steering wheel rim

radius

Fracture of the right proximal

Moderate (AIS 2)

Airbag module cover/Airbag

ulna

6 cm abrasion of the right

elbow

Minor (AIS 1)

Airbag module cover/Airbag

DRIVER KINEMATICS

The driver was seated in a normal, upright posture with her hands place at the ten and two o'clock positions on the steering wheel. As she completed her avoidance maneuvers of steering right and full braking, her upper body leaned to the left restrained by the torso belt. At this time her left hand was in the two to three o'clock position on the steering wheel rim and her right hand was reaching for the steering wheel rim at the ten o'clock position, i.e. her forearms were crossed over the steering wheel with her right forearm under her left. The impact occurred at about this time, causing her right hand and forearm to slip in front of the steering wheel rim, between the rim and instrument panel. Simultaneously the airbag deployed, as the Mercury's wheel shagged, striking her right elbow causing an abrasion and the fracture to the proximal ulna. The movement of the airbag out of the module drove her forearm against the steering wheel rim causing the distal radius fracture. Her right forearm was being driven up toward the roof at this point in time. The airbag deployed fully and restrained the driver's upper body.

According to the driver, the airbag did not deploy as it should. She stated that there was only about two inches of the bag out from the module cover and it was yellow in color. After a thorough investigation and examination of the airbag, no evidence could be found to support her contention.

HUMAN FACTORS/OCCUPANT DATA - VEHICLE #2

Driver

Age: 24 years old

Sex: Female

Height: 65.5 inches

Weight: 135 lbs.

Occupation: Research engineer

Active Restraint Usage: Lap and torso belt

Source of Usage: PAR and inspection

Injury: Contusion left thigh

Strained neck Lumbar strain

ATTACHMENTS

- Police Accident Report

- Airbag Accident and Person Level Form

- Medical Records for Driver of Airbag Vehicle

- Photographic Index and Photographs

MEDICAL RECORDS FOR DRIVER OF AIRBAG VEHICLE

T, T,

M₂

FOLLOW UP RECOMMENDATION

I understand and agree to follow up care

REQ DT: 259 EXAM DT:

90 1245

61Y

*** RADIOLOGY ***

PT: ATI ND:

11000

RAD:

ORD #: 0001 WRIST RIGHT, RIGHT FOREARM

XR:

CLINICAL INFORMATION: MVA.

STANDARD RADIOGRAPHS FOR EVALUATION OF THE RIGHT WRIST, RIGHT ELBOW, AND RIGHT FOREARM REVEAL AN OBLIQUE ESSENTIALLY NONDISPLACED FRACTURE INVOLVING THE DISTAL RADIAL METAPHYSIS WITHOUT COOD EVIDENCE OF EXTENSION INTO THE DISTAL EPIFHYSIS OR RADIAL-CARPAL JOINT SPACE. IN ADDITION AN OBLIQUE FRACTURE THROUGH THE PROXIMAL ULNAR EXTENDING INTO THE HUMERAL-ULNAR JOINT SPACE IS NOTED WITHOUT MAJOR DISPLACEMENT OF THE FRACTURE FRAGMENTS. THE REMAINING OSSEOUS STUCTURES APPEAR INTACT.

CONCLUSIONS: FRACTURES OF THE DISTAL RIGHT RADIUS AND PROXIMAL ULNAR AS DESCRIBED.

DD: 770



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	3	EMERGENC	DEPARTMENT
	Converse		☐ HEAD INJURY WARNINGS:
	SPRAINS:		Careful observation of the patient by a respon liberadult for the first 24-8 at least, is very important.
	 Sprains are ligament injuries with tearing and/or stretchands that hold bones together at a joint. Some ligame 		at least, is very important.
	serious.	in injuries can be very	1. Avoid strenuous physical activity for at leas 24 ours.
		.d (asa bandana	1. Avoid stretteds physical activity for at least
	The treatment of a sprain consists of resting the injure crutches, splints, casts, slings, etc.) elevation of the in	niured nart if possible	Light diet for 24 hours. Aspirin or substitute (Tylenol, etc.) for heads the protection of th
	and using intermittent cold packs to reduce swelling		hours as needed. No alcohol or strong pain media (18)
	avoid frostbite.	•	
	3. Minor sprains usually clear up in a few days. Persist	tent pain and swelling	4. Ice bag to bruises, intermittently, is permitted.
	means that reevaluation may be necessary. The exac	t extent of a ligament	5. Allow patient to sleep if he desires, but check him periodically for the first
	injury is more apparent on follow-up examinations. So	ome hairline fractures	24-48 hours.
	are not visible on initial x-rays. Repeat x-rays after a	a week may be needed.	 Headache and dizziness occur after any head injury, usually lasting only a few days.
	This is especially true in the wrist where occult fracture	res are common.	1
	4. With most sprains, do not resume strenuous activities.	until symptom free or	SEE YOUR PHYSICIAN FOR ANY OF THE FOLLOWING:
	until the orthopedist approves.		 Mental confusion, increasing drowsiness, difficulty arising.
			2. Persistent or projectile vomiting, stiff neck, fever.
7	F		3. Loss of balance, difficulty walking, weakness of arms or legs, loss of
	FRACTURES:		sensation anywhere.
	1. The principles of elevation, rest and intermittent cold	application still apply.	4. Persistent blurring of vision, pupils of different sizes.
	2. Follow-up with the orthopedist is very important.		5. Persistent or worsening headache.
	3. If a cest has been applied, avoid getting it wet.		6. Bloody or clear fluid from nose or ears.
	4. If a part becomes pale or numb, or if there is marked	increase in nain, then	7. Convulsions (fits), loss of consciousness, unusual restlessness, or agitation.
	 If a part becomes pale or numb, or if there is marked circulation might be impaired. This is a complication of 	of casts. Because of this.	
	some fractures are splinted initially and receive a circu	ular cast later when the	☐ MEDICATION WARNINGS:
	swelling is less. If there is a question of circulatory co	mpromise, then contact	Any medication can cause a reaction or adverse side-effect and is usually
	your doctor or return to the emergency department pro		impossible to foretell except by history. Think carefully when asked and read
_	_		the names of drugs you receive.
			NOTIFY DOCTOR OR NURSE IF YOU HAVE EVER HAD A
	BRUISES:	/	PROBLEM WITH THAT DRUG OR ANY DRUG IN THE PAST.
	1. Severe bruises can be helped by rest, elevation and in	termittent ice	2. Read label warnings and instructions when prescription is filled.
	application as with sprains.		3. Report all suspected problems to a doctor and stop taking drug immediately.
	2. Frequently, bruises become more prominent several de	ays after an accident.	4. Drowsiness Upset stomach Other
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Please note that most insurance companies pay for accident-related emergency room visits but usually do not pay for illness-related visits.

POLICE
ACCIDENT
REPORT

TEXAS PEACE OFFICER'S ACCIDENT REPORT ST-3 (EH. 1/1/90)	MAIL TO: Texas D	Department of Public Safety, Statistical	Services, Box 4087, Austin 78773-0001
PLACE WHERE ACCIDENT OCCURRED			LOC. NO.
IF ACCIDENT WAS OUTSIDE CITY LIMITS.	CITY OR TOWN	NUMBER CITY LIMITS	DO NOT WRITE IN THIS SPACE
INDICATE DISTANCE FROM NEAREST TOWN	_ MILES NORTH S E W OF	CITY OR TOWN	
ROAD ON WHICH ACCIDENT OCCURRED BLOCK NUMBER STREET OR ROAD NAME	77. ZO	DNSTR. TYES SPEED 40	LOC
INTERSECTING STREET OR RR X'ING NUMBER BLOCK NUMBER STREET OR ROAD NAME	· · · · · · · · · · · · · · · · · · ·	ONSTA. YES SPEED ONE ONO LIMIT	CODESEVERITY
NOT AT INTERSECTION 250 SFT. 5 TO 5	OF		TYPE
MI. N/ST E W	SHOW MILE UST ON NEAREST INTERSECTING NUMB IF NONE, SHOW NEAREST INTERSECTING STREET		FAT. REC DR. REC
DATE OF ACCIDENT 19 90 WEEK	HOUR 92	O .M. IF EXACTLY NOON OR MIDNIGHT, SO STATE	
UNIT - MOTOR VEHICLE	WELL LOCKET		
NU. 1	VEH. IDENT. 2ME	CM 75 F.2 L)	
MODEL 1990 & MAKEYRIX MERCULA NAME	RANNI MORRUIS STYLE 4	De Sala PLATE	TA STATE OF THE ST
DRIVER'S NAME		PHONE	
DRIVER'S LICENSE D.	O.B. 1. 28 RACE (1) SEX	CE OCCUPATION	offesson
LESSEE CLASSIFIE	MORTHICAY-YEAR		OR FIRE FIGHTER ON EMERGENCY?
OWNER NAME (ALWAYS SHOW 155 155 157 151 151 151 151 151 151 151	ADDRESS	JANE /	IF YES, DESCRIBE IN NARRATIVE
INSURANCE ON INSURANCE COMPANY NAME	POLICY NUMBER	VENICLE DI	AMAGE RATING
UNIT NO. 2 - MOTOR VEHICLE TRAIN - PEDALCYCLIST - PEDESTRIAN TOWED - OTMER -	VEH. IDENT. /6/L	114W4KE	
YEAR MODEL 1989 COLOR BLU CHELLET NAME	SERFITA BODY 2	1) & (De PLATE 7)	1 To
DRIVER'S	A STATE OF THE STA	PHONE YE	AR STATE NUMBER
DRIVER'S MIDDLE	ADDRESS' STIY	STATE	azch FARMEN
LICENSE D. CLASS/TYPE	MUNITEUA CIEM	OCCUPATION ASSE	OR FIRE FIGHTER ON EMERGENCY?
OWNER NAME (ALWAYS SHOW LESSEE LEAGED OTHERWISE SHOW OWNER	Abl		IF YES, DESCRIBE IN NARRATIVE
LIABILITY YES INSURANCE COMPANY NAME NO	POLICY NUMBER	VEHICLE DA	AMAGE RATING
DAMAGE TO PROPERTY OTHER THAN VEHICLES			
OBJECT NAME AND ADDRES	R OF OWNER	FEET FROM CURB	SDAMAGE ESTIMATE
		FEET FROM CURB	S DAMAGE ESTIMATE
OBJECT NAME AND ADDRES		PEEL PROM CORB	NAMAGE ESTIMATE
	JRFACE TYPE ROAD SURFACE 1-BLACKTOP	ے ما	NS (INVESTIGATOR'S OPINION)
	DRY 2-CONCRETE WET 3-GRAYEL	DRY CE	ucre4e
3-DARK-NOT LIGHTED 3-SNOWING 8-HIGH WINDS 3-	MUDDY 4-SHELL SNOWY/ICY 5-DIRT	/	
	OTHER 6-OTHER		
IN YOUR OPINION, DID THIS ACCIDENT RESULT IN AT LEAS	ST \$500.00 DAMAGE TO ANY ONE PE	RSON'S PROPERTY?	YES - NO
CHARGES FILED	ST \$500.00 DAMAGE TO ANY ONE PEI		YES - NO
	ST \$500.00 DAMAGE TO ANY ONE PEI	CIT NU	
CHARGES FILED		CIT CIT	TATION MBER
CHARGES FILED NAME NAME TIME NOTIFIED OF ACCIDENT FOR ACCIDENT	CHARGE	CIT NU CIT	TATION MBER
CHARGES FILED NAME NAME NAME	CHARGECHARGE	TIME ARRIVED AT SCENE OF ACCIDENT	TATION MBER ATION MBER 23 2 A

FOR ALCOHI A-Breath B-Blood C-Other N-None R-Refused	TYPE SPECIMEN TAKEN OL/DRUG ANALYSIS	CODE FOR TYPE RESTRAINT I A-Sast Bert & Shoulder Strap B-Sast Bert & Ne Shoulder Str C-Child Restraint D-Air Bag Deplayed E-Shoulder Strap Only N-None	A-Incapa ternal B-Noninc C-Possib	icitating injury - Severe injuries, crushed chest, etc capacitating injury - Evident ile Injury - Injury which ntary unconsciousness or ci	Injury such as bruises, abrasions, minor is claimed, reported or indicated b implaint of pain.	normal activ	ich de net is	eanacitate.			
DAMAGE RATING	COMPLETE ALL DATA ON	ALL OCCUPANTS NAMES, POSIT	IONS, RESTRAINTS U	SED, ETC.; HOWEVER, IT IS	NOT NECESSARY TO SHOW ADDRESSES	TYPE	RESULT	TYPE RESTRAINT	AGE	SEX	INJURY
POSITION	UNLESS KILLED OR INJUR NAME	RED. (LAST NAME FIRST)	gus)		DRESS	TAKEN		USED	1	-	CODE
DRIVER	See Front	0				N		747	61	<i>F</i>	
UNIT NO. 2 (Complete only if Unit No. 2	VEHICLE			and the same of the same of						
DAMAGE RATING	BRYFLOT	REMOVED TO		Ca	NOT NECESSARY TO SHOW ADDRESSES	I	1				
OCCUPANT'S POSITION	UNLESS KILLED ON INJU	ALL OCCUPANTS" NAMES, POSTT RED. 41AST NAME FIRST)	TOMS, RESTRAINTS U		NOT NECESSARY TO SHOW ADDRESSES DRESS	TYPE SPECIMEN TAKEN	RESULT	TYPE RESTRAINT USED	AGE	SEX	CODE
DRIVER	See Front					N.	-	A_	24	F	N
									<u> </u>		-
COMPLETE IF	CASUALTIES NOT IN MOTO	OR VEHICLE				J	1		·		·
PEDESTRIAN, PEDALCYCLIS ETC.	CASUAL	TY NAME (LAST NAME FIRST)			CASUALTY ADDRESS	 	TYPE SPECIME TAKEN	RESULT	AGE	SEX	CODE
DISPOSITION	OF KILLED AND INJURED	TAKEN TO			BY		TIME	IF AMBULANC	VED	NO. AT	TENDANTS ORIVER
/	Garne to	FAMILY Dock	·4	PRIVITA	Jehicle				\dashv		
								-	_		
Vehor New SIAE	1 DRIVER 100KED 6A 100KED	OF WHAT HAPPENED (ATTACH I NO A SO GCK AND NO HO CLATIA HEM OF UEL FI S 2 WAS KNOC HOLFQ OT	Jeh# 1 ed Jeh# pted x taum b ned int	FRECESSARY) Sperater Logenster Logenster Koperater Koperater	DIAGRAM DINE W DINDICATE NORTH DEWNA	TRAFFIC		7501			į
FACTO	AND CONDITIONS LISTE DRS/CONDITIONS CONTRIB NIT 1 1 4 4 2	ED ARE THE INVESTIGATOR'S	OPINION OTHER FACTORS/COMMAY OR MAY NOT H	NOTIONS AVE CONTRIBUTED	9-NO CONTROL OR INOPERATIVE 1-OFFICER OR FLABMAN 2-STOP AND 80 SIGNAL 3-STOP SIGN 4-FLASHING RED LIGHT	5-TURN MAI 6-WARNING 7-RR GATES 8-YIELD SIG 9-CENTER S	RKS SIGN OR SIGNAL N				0
1. A 2. A 3. 8 4. C 5. D 6. D 7. D 9. D 10. D 11. D 12. D 13. O 14. D 15. D	nimal on Road - Domestic nimal on Road - Wild acked Without Safety hanged Lane When Unsafe efective or No Tail Lamps efective or No Tail Lamps efective or No Tail Lamps efective or No Vehicle Brak efective Sterling Mechanis lefective Tailor Brake efective Tailor Hitch lisragarded Tail Tailor Brake lisragarded Step Sign or Lisragarded Tail Barba Sign a Lisragarded Warning Sign a lisragarded Warning Sign a	20. C 21. C 22. F 23. F 24. F 25. F 25. F 26. S 28. F 30. F 31. F 31. F 32. F 33. F 33. F 33. F 34. F 35. F 36. S 36. S 37. F 38. S 38. S	UNIT 2 Instruction in Vehicle Inver inattention Inver Without Heading! alled to Centrel Specialed to Erve in Single alled to Give Half of R alled to Head Warning alled to Head Warning alled to Pass to Right alled to Pass to Right alled to Signal or Gav alled to Yold ROW - Falled to Yold ROW -	I on Lone to Lone to Lone sedway 3 ligh salely salely to Wreng Signal r Place tol Bus tol Emergency Vehicle Open Intersection Privata Drive Stap Sign	37. Falled to Yield ROW - Turning Left 38. Falled to Yield ROW - Turn en Red 39. Falled to Yield ROW - Yield Sign 40. Fafigued er Asteep 41. Faulty Evsakve Action 42. Fire in Vehicle 43. Fleeing er Evsding Palica 44. Fallewed the Clesely 45. Had Been Drinkling 46. Handicapped Driver (Explain in Nar 47. ILL (Explain in Marrative) 49. Impaired Visibility (Explain in Marr 49. Impreper Start From Parked Positio 50. Leed Not Secured 51. Opened Deer Into Traffic Lane 52. Oversite and Falled to Set Brakes 55. Parked in Traffic Lane	rrative) ative) an	57. Passe 58. Passe 59. Pedes 60. Speed 61. Speed 62. Talkin 63. Turne 64. Turne 65. Turne 66. Turne 67. Under 68. Under 69. Wren 70. Wren 71. Wren	d Without Light d in No Passin d on Right She trien Falled to ling - Unasio (i ling - Over Lim g Hodication (i d Improperty - d Umproperty - d Whon Unasi r Influence - Dr g Side - Approx g Side - Note W Factor (Write)	g Zone uider Yield RC Uinder L It Explain I Cut Car Wide R Wrang I cohel 'ug ich er is ssing ay Read	imit) n Narri ner en igit Lane	itive) Left

AIRBAG ACCIDENT AND PERSON LEVEL FORM

AIRBAG ACCIDENT LEVEL FORM

(Leave Unknowns Blank)

$Q \wedge Q \wedge Q \wedge P$
Log Number 9002AB
Accident State _ exas
Accident Date
Month (January = 01, February = 02, etc.)
Day of Month
Year <u>9</u> <u>0</u>
Investigating Team
Fleet Vehicle 1 - 73' Chev, Volvo, or 72' Merc, 2 - No., 3 - Insurance Fleet, 4 - GSA Fleet , 5 - Police Fleet, 6 - Other Corporate PRIVATE fleet)
Did Airbag car require towing (1 = yes; 2 = no)
Did airbag deploy? (1 = yes; 2 = no; 3 = inadvertent)
More \sqrt{R} -Vehicle Make 9014006 (NASS Make/Mode)
CDC 1 1 1 P A W 4 1 Y/N (rank by 2
Highest AIS in Airbag car 2
Delta-V of principal damage to Airbag car 129 (Deployment Event)
Object struck by Airbag car 1989 Chev Beretta 02
Driver age in Airbag car O Lo L
Number of front seat occupants in Airbag car
Number of belted front seat occupants in Airbag car
Type of Investigation $S = \text{On-Site}$

AIRBAG PERSON LEVEL FORM

(Complete one form for each person in Airbag car)

	Log Number	r <u> </u>	2 A	B							
	Occupant 1	Number <u>O</u> _	Ca	ssigned by car; 01, 02,. osition)							
	Occupant's	age in year:	s <u>0 le</u>	L							
	Seating po	osition /		left center 1 F	irst perso	n in cente	r				
				center 2 right	.5 2						
	In which	seat was the	occupanta	1 (1 =	front, 2 =	back)					
	Was the occupant wearing a belt restraint? (1 = yes, 2 = no)										
	Was the o	ccupant kill	ed?	(1 = Not }	xilled, 2 =	killed)					
S.S.	•	oIC	INJURY SOURCE	DIRECT/ INDIRECT	SOURCE OF DATA						
910N	_ `	ES 2	-		03	(Use NASS Coding)	'පිපි				
<u>)</u>		E 5 2			03						
6	3 <u>F</u> K	AII	45		03						
	4					•.					
	5			•							
	6	-		-							
	7		-	·							
	8					•					
	9										
	10										
	11										
	12			_		•					

⁽if no injuries, enter 0 for first AIS and leave the rest of the OIC's blank)

PHOTOGRAPHIC INDEX AND PHOTOGRAPHS

PHOTOGRAPHIC INDEX

CASE NO. 9002AB

Photo No.	Description of Subject Matter
1.	Scene in direction of vehicle travel
2.	Scene in direction of vehicle travel
3.	Scene in direction of vehicle travel
4.	Scene against direction of vehicle travel
5.	Impact area on median barrier
6.	Exterior damage to airbag vehicle
7.	Exterior damage to airbag vehicle
8.	Exterior damage to airbag vehicle
9.	Exterior damage to airbag vehicle
10.	Interior of airbag vehicle
11.	Interior of airbag vehicle
12.	Interior of airbag vehicle
13.	Module cover bottom
14.	Module cover top
15.	Steering wheel rim
16.	Airbag. Note that the bag had been stuffed into module after deployment
17.	Airbag
18.	Airbag
19.	Interior of airbag vehicle

Description of Subject Matter Photo No. Interior of airbag vehicle 20. Interior of airbag vehicle 21. Interior of airbag vehicle 22. Interior of airbag vehicle 23. Note loading ripples in belt webbing 24. 25. Intrusion in rear seat Exterior of vehicle 2 26. 27. Exterior of vehicle 2 Exterior of vehicle 2 28. Exterior of vehicle 2 29. Exterior of vehicle 2 30. Exterior of vehicle 2 31. Exterior of vehicle 2 32. Exterior of vehicle 2 33. Exterior of vehicle 2 34.

Interior of vehicle 2

35.









































